COMPAQ

Compaq TFT1501
15-inch
LCD Monitor

(15-inch Viewable Image)

User's Guide



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Compaq TFT1501 User's Guide
First Edition June 2002
Document Part Number: 302049-003

Contents

Introduction

This latest LCD monitor has a 15-inch active matrix TFT (thin film transistor) liquid crystal display module. It is designed for use with any Windows®-based PC. The monitor's compact design provides great space savings on your computer desk.

Features

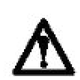
Important features include:

- ⇨ Automatic configuration to the PC video settings with maximum XGA (1024 x 768) resolution.
- ⇨ Three control buttons, plus OSD (on-screen display) for easy monitor settings adjustment and configuration with instant feedback.
- ⇨ Support analog video input for direct and immediate replacement of CRT displays.
- ⇨ Tilt feature to optimize viewing position.
- ⇨ Compliant with VESA Mounting standard for easy mounting on wall or mechanical arms.
- ⇨ Anti-glare coating on the panel to reduce the reflection of ambient light.
- ⇨ Flicker-free performance across all recommended video modes.
- ⇨ Support for high refresh rates up to 75 Hz.
- ⇨ VESA DDC2B Plug-and-Display compliant.
- ⇨ A Power-saving feature that is compatible with Microsoft® Windows
- ⇨ This monitor is compliant with ISO 13406-2 guidelines for ergonomics and picture quality.
- ⇨ Compliant with TCO99 guidelines for reduced electromagnetic emission.

Note: ***The lighting flash with the arrowhead symbol inside an equilateral triangle is intended to alert the user to the presence of uninsulated, dangerous voltage which may be of sufficient magnitude to constitute a risk of electric shock.***



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and servicing instructions in the literature accompanying the appliance.



For Your Safety

For your safety and the protection of your monitor, follow these precautions:

- ⇨ Use only the factory-supplied power cord that shipped with your monitor.
- ⇨ To prevent electrical shock, do not disassemble the display. The cover should be removed only by qualified service personnel.
- ⇨ Do not cover the air vents.
- ⇨ To avoid the risk of damage to the display and electrical shock to yourself, do not expose the display to rain or moisture.
- ⇨ Make sure the computer is turned off before connecting or disconnecting a display peripheral.

> **Warning**
>
> *To completely disconnect power from your display, you must remove the power cord from the wall outlet and then remove the power cable from the display.*
>
> *Only use with the power adapter supplied with the product. To avoid electrical shock, do not open the power adapter. There are no user-serviceable parts inside. Refer servicing to qualified service personnel.*

- ⇨ If you are in any doubt that you can lift the equipment safely, do not try to move it without help.

If any of the following conditions occur, unplug the display and contact qualified service personnel:

- ⇨ The power cord or plug is frayed or damaged.
- ⇨ You have spilled liquid into the display.
- ⇨ The display has been exposed to rain or water.
- ⇨ The display does not operate correctly when the operating instructions are followed.
- ⇨ The display has been dropped or the cabinet has been damaged.

Working in Comfort

To optimize your comfort and productivity, it's important that you set up your work area correctly and use your HP equipment properly. With that in mind, we have developed some setup and use recommendations for you to follow based on established ergonomic principles.

You can consult the online version of the Safety & Comfort Guide on the Web site at:

http://www.compaq.com/comfortguide

Installation

Please follow the instructions in this chapter to install your LCD monitor.

Note: ***Before connecting your monitor, first read through the instructions in this chapter and the safety precautions in the previous chapter.***

Unpacking the Monitor

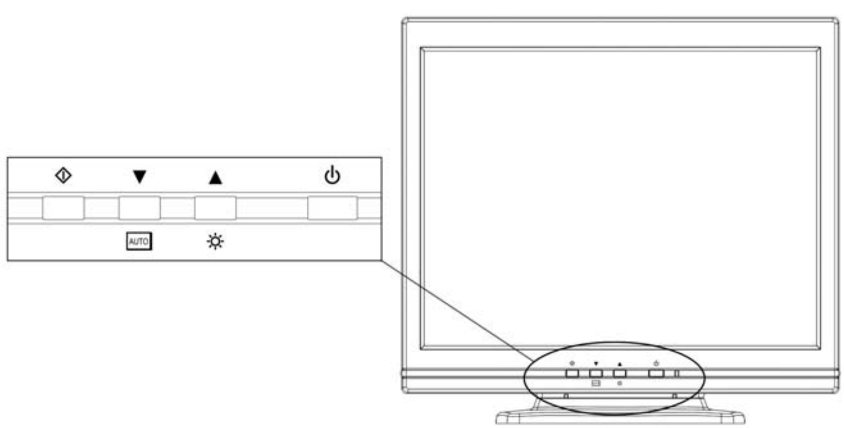
When you are unpacking the monitor, make sure that you have the following items:

- ⇨ The LCD monitor
- ⇨ AC power adapter with attached DC power cable
- ⇨ A power cord
- ⇨ Analog video signal cable
- ⇨ CD with User's Guide and Driver
- ⇨ Quick Start Guide
- ⇨ Warranty Booklet

Note: ***Place the monitor on a flat, sturdy surface. Choose an area free from excessive heat, moisture, and sunlight.***

Locations and Functions of Controls

There are three control buttons and one power button on the front panel of the monitor, as well as an LED for power status indication.



Use the power button located at the lower middle of the front panel of your monitor to turn on and off the monitor.

Three control buttons are also located at the lower middle of the front panel of your monitor. Their functions are described below:

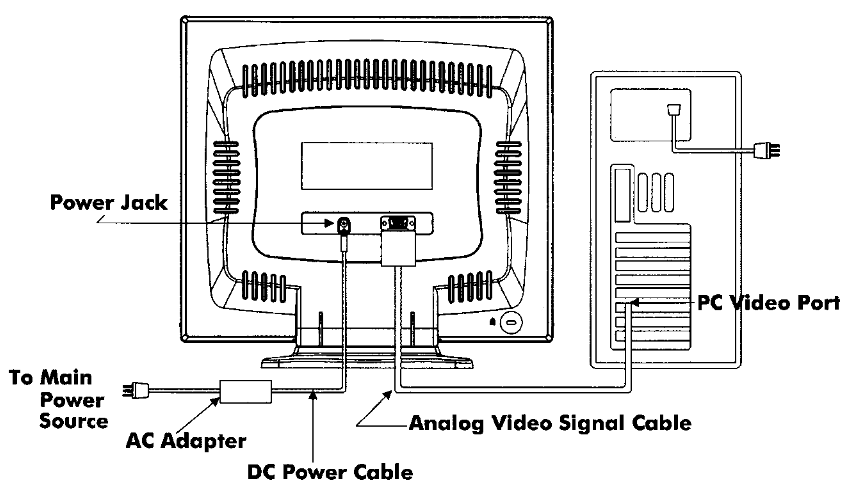
Button	Function Description
Select (◇)	(1) Opens the OSD Main Menu. (2) Selects item for user adjustment.
Up (▲)	(1) Moves upward through items in the OSD Main Menu, or increases user-adjustable values. (2) Opens Brightness Menu (Direct-key function).
Down (▼)	(1) Moves downward through items in the OSD Main Menu, or decreases user-adjustable values. (2) Auto Configuration (Direct-key function).

Connecting Your Monitor

Before connecting any cables, make sure that the computer and monitor are turned off.

To connect the power and video signal cables:

1. Locate the AC power adapter with attached DC power cable.
2. Connect the DC power cable to the power jack on the back of the monitor (as shown below).
3. Plug the power cord into the AC adapter and then into the main power source.



4. Plug the analog video signal cable into the Analog Video Input port on the back of the monitor (as shown above).

5. Connect the other end of the video cable into your computer's video port. (Please check your computer's documentation for port location.)

Note: ***For best monitor performance, it is strongly recommended that you use Auto Configuration to automatically configure your monitor's settings.***

How to Install the Drivers

The monitor comes with driver software that allows you to take advantage of the Plug and Play feature of the Windows® Me, Windows 2000, or Windows XP operating system. This software enables the computer to communicate with the monitor and use all the monitor features. Without this software, the monitor settings and display images will not be correct.

NOTE: ***Computers may ship with the Plug and Play drivers preinstalled. If you have an older computer, these drivers may not be preinstalled and you may need to install the drivers from the CD-ROM disc that came with the monitor.***

You can also download the latest version of a driver from the Monitor Support Web site at: http://www.hp.com/go/support

Windows 2000 Users

NOTE: ***The procedure for installing the driver for your operating system may vary.***

To install the driver for your monitor:

1. Click **Start,** select **Settings,** and then click **Control Panel.**
2. Double-click **Display.**
3. Click the **Settings** tab.
4. Click **Advanced Properties** or **Advanced,** and select the **Monitor** tab.
5. Click **Properties.**
6. Click the **Driver** tab.
7. Click **Update Driver** and click **Next.**
8. Select the recommended option and then click **Next.**
9. Select the **Specify a Location** box.
10. Find and open the **TFT1501.inf** file on the CD-ROM disc in the Drivers directory, and click **OK.**
11. Click **Next** to install the selected monitor.

Windows Me Users

NOTE: ***The procedure for installing the driver for your operating system may vary.***

To install the driver for your monitor:

1. Click **Start,** select **Settings,** and then click **Control Panel**
2. Click **Display.**

3. Select the **Settings** tab.
4. Click **Advanced** button.
5. Select the **Monitor** tab.
6. Click the **Change** button.
7. Select the **Specify a Location** box.
8. Find and open the **TFT1501.inf** file on the CD-ROM disc in the Drivers directory, and click **OK.**
9. Click **Next** to install the selected monitor.

Windows XP Users

NOTE: ***The procedure for installing the driver for your operating system may vary.***

To install the driver for your monitor:

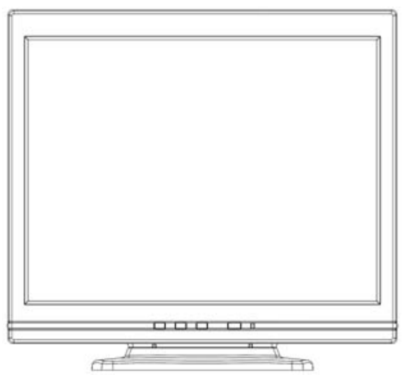
1. Click **Start.**
2. Click **Control Panel.**
3. Click **Appearance and Themes.**
4. Click **Display.**
5. Select the **Settings** tab.
6. Click the **Advanced** button.
7. Select the **Monitor** tab.
8. Click **Properties button.**
9. Select the **Driver** tab.
10. Click **Update Driver** and click **Next.**
11. Select the recommended option and then click **Next.**
12. Select the **Specify a Location** box.
13. Find and open the **TFT1501.inf** file on the CD-ROM disc in the Drivers directory, and click **OK.**
14. Click **Next** to install the selected monitor.

Using Your Monitor

This chapter contains information about using your LCD monitor.

Turning the Monitor On and Off

Use the power button located at the lower middle of the front panel of the monitor to turn the monitor on and off. When the monitor is on, the light (LED) near the Power button is illuminated. The light is green when both the monitor and PC are active, and amber when the monitor is in a reduced power mode.



If your PC sends power saving signals to the monitor, the monitor's power management features reduce power consumption to low levels when your PC goes into its power-saving mode. See the "Minimizing Power Consumption" section for more information.

If your PC doesn't use industry standard power-save signaling techniques, you can reduce power consumption by turning off the monitor when it won't be used for an extended period. You can turn the monitor off even if you leave your PC running.

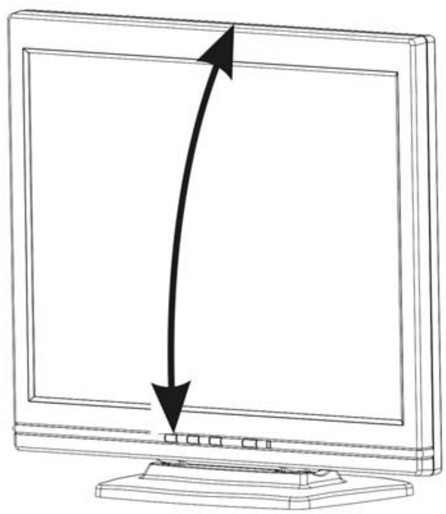
Note:

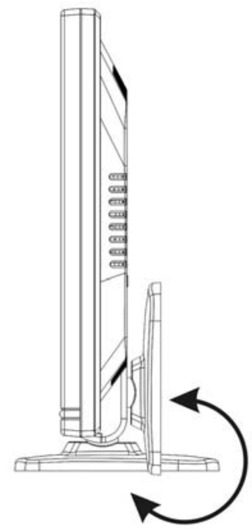
Because of the technology used in LCD panels, screen savers will not prolong the life of your monitor. So if the monitor will not be used for an extended period, be sure to turn it off.

> ⚠ Warning
>
> *To completely disconnect power from your display, you must remove the power cord from the wall outlet and then remove the power cable from the display.*

Tilting the Monitor

The monitor has a tilt feature that allows you to tilt the monitor back and forth to find the most comfortable viewing position. To tilt the monitor, grasp the sides and push the monitor back or pull it toward you until it is in the desired position. The monitor can be tilted 20° backward and 5° forward.





Note: ***Do not tilt the monitor by grasping the top edge.***

Setting the Video Mode

Since the inherent format of this monitor is 1024 pixels by 768 lines, the monitor will perform best when your PC is set to a screen resolution of 1024 x 768. If you use a lower resolution (such as 640 x 480), the image is expanded to fill the screen but with a slightly degraded image quality.

Your monitor supports many common video modes, as shown in the "Video Modes" section. Check the documentation supplied with your PC and video adapter card to find out which modes they support.

To view the video mode in Microsoft Windows, check the Windows settings in your PC.

Setting the Refresh Rate

The image ***refresh rate*** is the number of times per second that the image is refreshed; it is also known as the ***vertical frequency.***

Although your LCD monitor supports up to 75 Hz for analog video input, we recommend that you use **60 Hz** refresh rate for best performance. The table in the "Video Mode" section shows the image refresh rates supported by the monitor at different screen resolutions.

To set the refresh rate with a standard Windows installation, consult your Windows or graphics card documentation.

Minimizing Power Consumption

Many PCs support industry standard power-save signaling techniques. Power management features reduce the monitor's power consumption after a period of keyboard and mouse inactivity.

When the monitor is in a power-saving mode, the screen is blank and the power indicator turns amber. Pressing a key on the keyboard or moving the mouse restores the image in several seconds. Consult your PC documentation for information about setting the power-saving modes.

The monitor accepts the signals for the three standard power-saving modes – Standby, Suspend, and Sleep – from your PC. For any of these conditions, the monitor will go into Sleep mode.

Caring for and Cleaning the Monitor

To maximize screen life and prevent damage to the LCD panel, we recommend that you:

- ⇨ Use the monitor power management system (if available on your PC).
- ⇨ If you don't use a power management system, turn off the monitor when you won't be using it for an extended period.
- ⇨ Don't press, rub, or poke the monitor with your finger or other object.
- ⇨ Handle your monitor with care.

Your LCD module is a high-quality optical device that requires special care when cleaning.

> ⚠ Warning
>
> *Don't use liquid, aerosol, or abrasive cleaning solutions to clean the screen.*

To clean the screen:

1. Shut down the PC.
2. Turn off and unplug the monitor.
3. Gently dust the screen with a dry, soft, lint-free cloth.

Note: ***If the screen is still dirty, you can dampen the cloth with several drops of distilled water. Make sure the LCD panel is completely dry before you turn the monitor back on.***

4. Plug in the monitor.
5. Turn on your PC and monitor.

Adjusting Your Monitor

This chapter contains information about how to change display settings for your LCD Monitor. It is designed with an On-Screen Display (OSD) menu to help you easily adjust to its optimum performance.

Note: ***You must perform Auto Configuration before making any adjustment.***

Summary of Control Buttons

There are three control buttons located at the lower middle part of the front panel of your monitor:

⇨ **Select** (◇)**:** Displays the OSD **Main Menu** and selects items for user adjustment.

⇨ **Up** (▲): Moves upward through the choice in the OSD **Main Menu.** If an adjustment bar is displayed, this button increases the setting value.

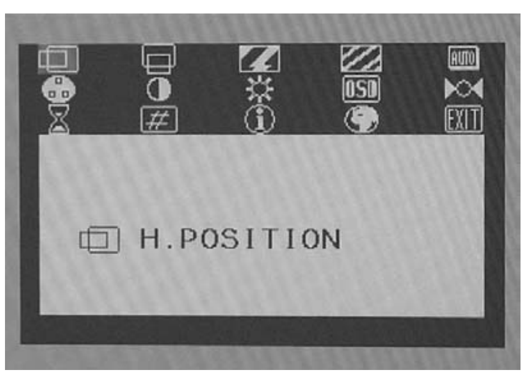
Note: ***This key is also used as a direct key. When the OSD Main Menu is inactive, press this key to open the OSD Brightness Menu.***

⇨ Down (▼): Moves downward through the choice in the OSD Main Menu. If an adjustment bar is displayed, this button decreases the setting value.

Note: ***This key is also used as a direct key. When the OSD Main Menu is inactive, press this key to perform the Auto Configuration function.***

Displaying the OSD Main Menu

You can use the OSD features to change the screen settings of your monitor. To display the OSD **Main Menu,** press the **Select** (◇) button.



The following table briefly describes each of the items in the OSD **Main Menu.**

Option	Description
H . POSITION	Adjusts the horizontal (H) position of the displayed image. The default setting of H position is in the middle.
V. POSITION	Adjusts the vertical (V) position of the displayed image. The default setting of V position is in the middle.
CLOCK	Adjusts the timing clock setting of the display. The default setting of the timing clock is in the middle (50).
PHASE	Adjusts the phase setting of the display. The optimum phase setting will be different for different PCs.
AUTO	Performs image auto adjustment function.
COLOR	Opens the **COLOR** submenu where you can select BLUISH, WHITE, REDDISH, or USER RGB SAVE options.
CONTRAST	Adjusts the level of difference between light and dark areas of the image.
BRIGHTNESS	Controls the brightness of the display by adjusting the light output of the backlight.
OSD Display	Opens the **OSD Display** submenu where you can select OSD TIMEOUT, INFORM ON-OFF, H POSITION, or V POSITION options for further adjusting.
MODE RECALL	Recalls the manufacturing factory settings for current mode.
BACKLIGHT INFO	Displays the elapsed turn-on time of the backlight.
SERIAL NUMBER	Displays the serial number of your monitor.
MODE INFO	Displays the associated information of current mode used by your display. Also, it contains the supported modes of this monitor.
LANGUAGE	Opens the **LANGUAGE** submenu where you can select ENGLISH, DEUTSCH, FRANÇAIS, ITALIANO or ESPANOL options.
EXIT	Exits the **Main Menu.**

Selecting Items in the OSD Menu

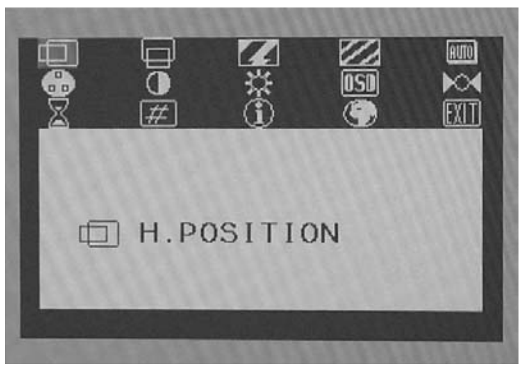
To select a specific item in the OSD **Main Menu,** or a specific item in the OSD submenu, use the **Up** (▲) and Down (▼) buttons to move to that item, and then select it by pressing the **Select** (◇) button.

Making Adjustments in the OSD Menu

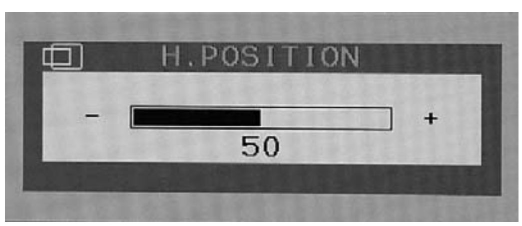
Adjusting the Positions of the Displayed Images

To adjust the horizontal (or vertical) positions of the displayed images, follow the steps below:

1. Open the OSD **Main Menu** by pressing the **Select** (◇) button.
2. Press the **Up** (▲) or **Down** (▼) buttons to move forward or backward to the H . POSITION (or V . POSITION) icon and highlight it.



3. Press the **Select** (◇) button to select it. This will open the H . POSITION (or V . POSITION) bar with the associated numeric value for your adjustment onscreen.



4. Press the **Up** (▲) or **Down** (▼) buttons to adjust its value. The range for adjustment is from 0 to 100. The **Up** (▲) button will increase the numeric value of the setting and the **Down** (▼) button will decrease it.

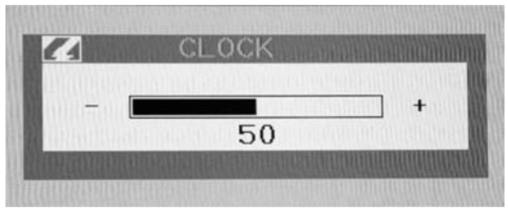
Adjusting the Clock and Phase Settings

To adjust the clock (or phase) setting, follow the steps below:

1. Open the OSD **Main Menu** by pressing the **Select** (◇) button.

2. Press the **Up** (▲) or **Down** (▼) buttons to move forward or backward to the CLOCK (or PHASE) icon and highlight it.

3. Press the **Select** (◇) button to select it. This will open the CLOCK (or PHASE) bar with the associated numeric value for your adjustment onscreen.



4. Press the **Up** (▲) or **Down** (▼) buttons to adjust its value. The range for adjustment is from 0 to 100. The **Up** (▲) button will increase the numeric value of the setting and the **Down** (▼) button will decrease it.

Tip: ***If Auto Configuration does not produce a clear image, try adjusting the PHASE setting.***

Performing Auto Setup in the OSD Menu

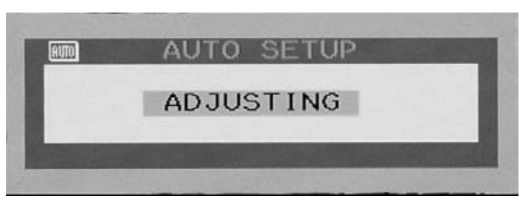
To perform auto adjustment in the OSD menu, follow the steps below:

1. Open the OSD **Main Menu** by pressing the **Select** (◇) button.

2. Press the **Up** (▲) or **Down** (▼) buttons to move forward or backward to the AUTO icon and highlight it.

3. Press the **Select** (◇) button to select it. This will open the AUTO SETUP submenu

   and start the auto adjustment function.



After the auto adjustment is complete, the OSD will close.

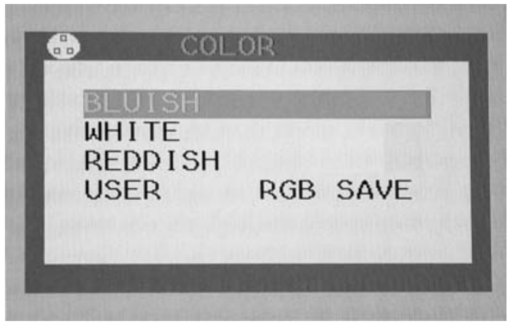
Configuring Colors

To configure the color settings for your preference, follows the steps below:

1. Open the OSD **Main Menu** by pressing the **Select** (◇) button.

2. Press the **Up** (▲) or **Down** (▼) buttons to move forward or backward to the COLOR icon and highlight it.

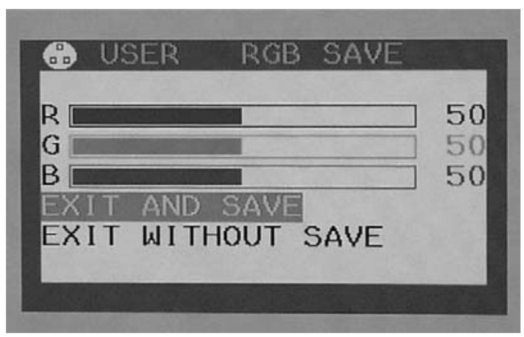
3. Press the **Select** (◇) button to select it. This will open the COLOR submenu with four options in it: BLUISH, WHITE, REDDISH, and USER RGB SAVE.



4. Press the **Up** (▲) or **Down** (▼) buttons to select the setting.

   As you choose an item, the color setting of your display immediately updates to reflect this setting.

   You may also set your own color definitions. To do this, move to the USER RGB SAVE option, and then press the **Select** (◇) button. This will open the USER RGB SAVE submenu.



Press the **Up** (▲) or **Down** (▼) buttons to choose and move to one of the five options (R, G, B, EXIT AND SAVE, and EXIT WITHOUT SAVE) and then press the **Select** (◇) button to select it.

If the R, G or B options are selected, the foreground color Yellow will be changed to White (the color of background is Pink). Then you may adjust its setting by pressing the **Up** (▲) or **Down** (▼) buttons. This control may be helpful in achieving a more natural appearance in graphic images and closer color matching between the printer and the monitor.

After you are finished adjusting the settings, save the new settings by choosing the EXIT AND SAVE option. Or you may cancel the settings by choosing the EXIT WITHOUT SAVE option.

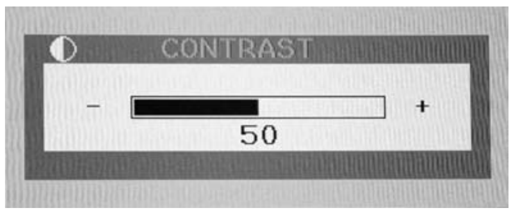
Adjusting Contrast and Brightness

To adjust the contrast (or brightness) of the displayed images, follow the steps below:

1. Open the OSD **Main Menu** by selecting the **Select** (◊) button.

2. Press the **Up** (▲) or **Down** (▼) buttons to move forward or backward to the CONTRAST (or BRIGHTNESS) icon and highlight it.

3. Press the **Select** (◊) button to select it. This will open the CONTRAST (or BRIGHTNESS) bar with associated numeric value for your adjustment onscreen.



4. Press the **Up** (▲) or **Down** (▼) buttons to adjust its value. The range for adjustment is from 0 to 100. Pressing the **Up** (▲) button will increase the numeric value of the setting and pressing the **Down** (▼) button will decrease it.

Adjusting the OSD Display

To adjust the OSD display, follow the steps below:

1. Open the OSD **Main Menu** by selecting the **Select** (◊) button.

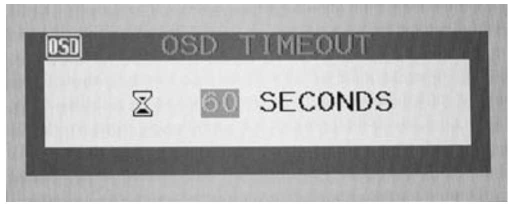
2. Press the **Up** (▲) or **Down** (▼) buttons to move forward or backward to the OSD Display icon and highlight it.

3. Press the **Select** (◊) button to select it. This will open the OSD Display submenu with five options in it.

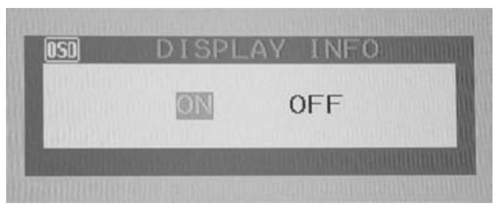
   Select EXIT to exit the OSD Display submenu and go back to the **Main Menu.**



You may determine how long the OSD will stay onscreen by selecting the OSD TIMEOUT option. Increase or decrease the OSD display time by pressing the **Up** (▲) or **Down** (▼) buttons in the OSD TIMEOUT submenu. The maximum timeout setting is 60 seconds.



You may turn on or off the displayed image information by selecting the INFORM ON-OFF option. Turn this option on to display information onscreen that informs you when the input signal has been changed.



If you want to put your OSD menu on a certain location on the screen, select the H . POSITION and V . POSITION options. Press the **Up** (▲) or **Down** (▼) buttons to change the OSD position in the submenus using these two options.

Reverting to Factory Default Settings

If you have made some incorrect adjustments in the OSD menus and you don't know how to get back to a good setting, don't worry. The MODE RECALL feature will return you to a good starting point: the factory settings. To do a MODE RECALL, follow the steps below:

1. Open the OSD **Main Menu** by pressing the **Select** (◇) button.
2. Press the **Up** (▲) or **Down** (▼) buttons to move forward or backward to the MODE RECALL icon and highlight it.
3. Press the **Select** (◇) button to select it. This will return you to the factory settings immediately.

Note: ***MODE RECALL will return you the following settings:***

H . POSITION and V . POSITION of the displayed image and OSD menu, BRIGHTNESS and CONTRAST, CLOCK AND PHASE. COLOR will be set to WHITE.

Checking Other Information about Your Monitor

There is some useful information available to you with the OSD display. These include BACKLIGHT INFO, SERIAL NUMBER and MODE INFO.

BACKLIGHT INFO tells you the total accumulated time the backlight has been turned on. To show this information, follow the steps below:

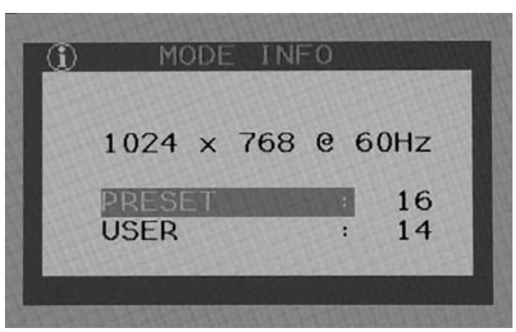
1. Open the OSD **Main Menu** by pressing the **Select** (◇) button.
2. Press the **Up** (▲) or **Down** (▼) buttons to move forward or backward to the BACKLIGHT INFO icon and highlight it.
3. Press the **Select** (◇) button to select it. This will open the submenu.

SERIAL NUMBER tells you the identification number of your monitor. To show this information, follow the steps below:

1. Open the OSD **Main Menu** by pressing the **Select** (◇) button.
2. Press the **Up** (▲) or **Down** (▼) buttons to move forward or backward to the SERIAL NUMBER icon and highlight it.
3. Press the **Select** (◇) button to select it. This will open the submenu.

MODE INFO tells you information about the mode displayed currently. Also, it will show you the preset modes and currently saved user modes. To show this information, follow the steps below:

1. Open the OSD **Main Menu** by pressing the **Select** (◇) button. Press the **Up** (▲) or **Down** (▼) buttons to move forward or backward to the MODE INFO icon and highlight it.
2. Press the **Select** (◇) button to select it. This will open the submenu.
3. Press the **Up** (▲) or **Down** (▼) buttons select options in the MODE INFO submenu. There are two additional submenus, PRESET and USER, which give you information about the preset and user modes currently supported in your display.



Choosing Your Native or Preferred Language for the OSD Display

There are five language options for the OSD display: English, Deutsch, Françàis, Italiano, and Español. To make your choice, follow the steps below:

1. Open the OSD **Main Menu** by pressing the **Select** (◇) button.
2. Press the **Up** (▲) or **Down** (▼) buttons to move forward or backward to the LANGUAGE icon and highlight it.
3. Press the **Select** (◇) button to select it. This will open the LANGUAGE submenu.



4. Press the **Up** (▲) or **Down** (▼) buttons to select the language you prefer.

Tip: ***As you choose an item, your OSD information displayed immediately updates to reflect this setting.***

Exiting the OSD Menu

In the OSD Main Menu, just press the **Up** (▲) or **Down** (▼) buttons to move forward or backward to the EXIT icon, highlight it, and select it by pressing the **Select** (◇) button. The OSD menu will close.

Using the Direct Keys

There are two direct keys that function while the OSD **Main Menu** is inactive: one executes Auto Setup (AUTO) and the other opens the OSD **BRIGHTNESS** (☼) submenu.

Performing Auto Setup Using the Direct Key

Use Auto Setup whenever you apply a new video mode or change the refresh rate. While the Auto Setup routine is running, you should have a stable image displayed on the screen. Do not move items around the screen, changing display mode, play games, or view video during Auto Setup.

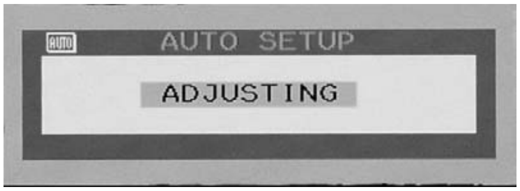
For display image with black background, such as DOS mode, please do not perform Auto Setup.

Note: ***Auto Setup uses state-of-the-art signal processing algorithms based on the image displayed on your screen. Therefore, you should not change the image on your screen while Auto Setup is running.***

Once you have executed Auto Setup for a particular mode, the monitor will store the new values in its permanent memory.

To execute Auto Setup using the Direct Key function:

1. Make sure the OSD **Main Menu** is not displayed onscreen. Press the **Down** (▼) button to open the **AUTO SETUP** (AUTO) submenu and start running Auto Setup.



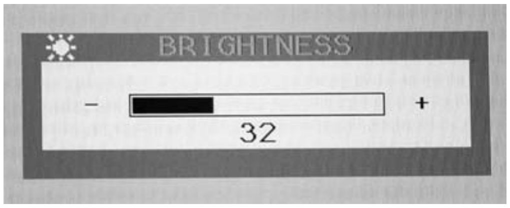
2. After Auto Setup has finished, you should have a stable and clear image.

Adjusting Brightness Using the Direct Key

To adjust brightness directly:

1. Make sure the OSD **Main Menu** is not displayed onscreen. Press the **Up** (▲) button to open the **BRIGHTNESS** (☼) submenu.

2. Press the **Up** (▲) or **Down** (▼) buttons to increase or decrease the brightness setting.



3. Press the **Select** (◇) button to close and exit the **BRIGHTNESS** menu.

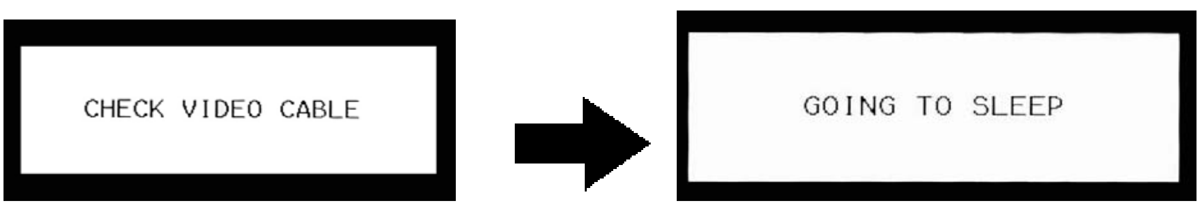
Troubleshooting

This chapter contains information about how to troubleshoot your LCD Monitor. If you have tried all of the items listed below, please contact a qualified service technician.

A. My monitor doesn’t work, even though the computer appears to work.

1. Make sure the power cable is securely plugged into the monitor.
2. Make sure the monitor is turned on.
3. Try turning the monitor off and then turning it on again.
4. Make sure the monitor’s power cord is plugged into a power outlet and into the AC power adapter. Check to see whether the outlet works by plugging another device (such as a lamp) into the outlet. (If the light on the front of the monitor is lit, it is getting power. Try the next item on this procedure.)
5. Check the cable connection between the monitor and the computer. The cable connectors must be pushed in all the way.

B. The message “CHECK VIDEO CABLE” and then “GOING TO SLEEP” appears on my monitor.

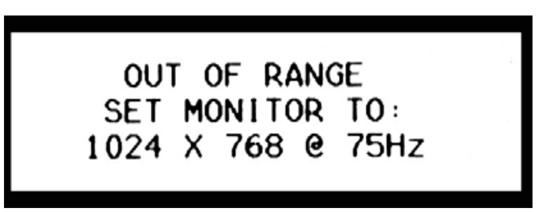


This message appears when the video cable is not properly connected to the computer.

1. Make sure the analog video cable is plugged into the Analog Video Input port on the back of the monitor.

2. Make sure the other end of the analog video cable is plugged into the PC’s video port.

C. The message “OUT OF RANGE SET MONITOR TO 1024 × 768 @ 75Hz” appears on my monitor.



This message appears when you set your pc to an unsupported video mode.

1. Set your pc to a supported video mode, preferably 1024× 768 at 75Hz.

D. The message "NO INPUT SIGNAL" appears on my monitor.



This message appears when pc or other devices has no input signal.

1. Check pc or other devices keep working in normal mode not in quit mode.

E. The image is very unstable.

1. Set your PC to a supported video mode, preferably 1024 x 768 at 60 Hz. See the "Setting the Video Mode" section.
2. Restore the original factory settings by choosing MODE RECALL in the OSD Main Menu.
3. Perform the Auto Configuration function. See the "Performing Auto Configuration Using the Direct Key" section.

LCD Monitor Quality and Pixel Policy for Compaq TFT1501 Monitor

Compaq TFT1501 15-inch monitor

The Compaq TFT1501 monitor uses high-precision technology, manufactured according to HP standards, to guarantee trouble-free performance. Nevertheless, the monitor may have cosmetic imperfections that appear as small bright or dark spots. This is common to all LCD monitors used in products supplied by all vendors and is not specific to the Compaq TFT1501 LCD. One or more defective pixels or sub-pixels cause these imperfections.

- A pixel consists of one red, one green, and one blue sub-pixel.
- A defective whole pixel is always on (a bright spot on a dark background), or it is always off (a dark spot on a bright background). The first is the more visible of the two.
- A defective sub-pixel (dot defect) is less visible than a defective whole pixel and is small and only visible on a specific background.

The Compaq TFT1501 monitor does not have more than:

- 10 total dot defects.
- 10 defective full pixels.
- 10 defective red sub-pixels.
- 4 defective green sub-pixels (green is most visible).
- 10 defective blue sub-pixels.
- No more than two adjacent (less than 2.5 mm edge-to-edge) and defective pixels.
- No more than two pairs of two adjacent defective pixels.

To locate defective pixels, the monitor should be viewed under normal operating conditions, in normal operating mode at a supported resolution and refresh rate, from a distance of approximately 50 cm (16 in.).

HP expects that, over time, the industry will continue to improve its ability to produce LCDs with fewer cosmetic imperfections and HP will adjust guidelines as improvements are made.

Technical Information

This chapter contains technical information about your LCD Monitor.

Monitor Information

LCD Module	15-in (38,1 cm), active matrix TFT, anti-glare coating, 0.297 mm(0,297mm) pixel pitch
Display Size	304 mm x 228 mm
Viewing Angle	
Left/Right	-60° - 60°
Up/Down	-55° - 45°
Luminance	220 cd/m^2 (Typical)
Contrast Ratio	350 : 1 (Typical)
Display Colors	16.7 (16,7) Millions
AC Adapter	
Input	100 - 240 V~Full Range, 1.2A (1,2A) - 0.6A (0,6A)
Output	12 V⎓, 3.3 A (3,3A)
Power consumption	Operating mode: 30W max. Off mode: 2W max.
Signal Input	
Video Signal	RGB positive $0.7V_{PP}$ ($0,7V_{PP}$) , 75 ohm
Sync signals	Separate, TTL Level
Line (horizontal) frequency	30 kHz - 63 kHz
Raster (vertical) frequency	56 Hz - 75 Hz
Pixel dot clock	80 MHz (maximum)
Recommended mode	1024 x 768 @ 60 Hz
Pedestal tilt	20° forward, -5°backward
Dimensions (W x H x D)	341 mm x 317 mm x 140 mm 341 mm x 338 mm x 68 mm (pedestal fold)
Net weight	3.0 kg (3,0 kg)
Gross weight	4.5 kg (4,5 kg)

Operating Conditions	
Temperature	5° - 40°C at altitude 0 - 2000m 5° - 30°C at altitude 2000 - 3000m
Humidity	20% - 85% RH, non-condensing
Altitude	3000m Max.
Storage Conditions	
Temperature	-20° - 60°C
Humidity	5% - 95% RH
Altitude	10000m Max.

Video Modes

Your LCD monitor supports the following industry-standard combinations of screen resolution and refresh rates. Other combinations are possible, but may require adjustments to the image.

For optimum performance, set your PC to a screen resolution of 1024 x 768 at a 60 Hz refresh rate.

Supported Resolution (dots x lines)		Vertical Frequency (Refresh Rate)
VGA	640 x 480	60 Hz
	640 x 480	70 Hz
	640 x 480	72 Hz
	640 x 480	75 Hz
SVGA	800 x 600	56 Hz
	800 x 600	60 Hz
	800 x 600	70 Hz
	800 x 600	72 Hz
	800 x 600	75 Hz
XGA	1024 x 768	60 Hz
	1024 x 768	70 Hz
	1024 x 768	72 Hz
	1024 x 768	75 Hz
US TEXT	720 x 400	70 Hz
Power MAC	640 x 480	67 Hz
	832 x 624	75 Hz

Unknown Video Modes

Like all other monitors, your LCD monitor is designed to work with standard video modes. However, not all video/graphics cards use only standard display modes.

Your LCD monitor uses state-of-the-art technology, which is designed to automatically synchronize to any display mode listed in the above table. We recommend you choose one of the supported modes listed above. If you choose an unknown mode, you will need to manually adjust the clock, phase, and image position and may still get a bad display.

If you must use a display mode beyond the above list, you should run Auto Configuration first. If Auto Configuration doesn't provide adequate image adjustment, then you must manually adjust the clock, phase, horizontal position, and vertical position. If this still not work, please choose a recommended mode.

DECLARATION OF CONFORMITY

According to ISO/IEC Guide 22 and CEN/CENELEC EN 45014

Manufacturer's name: HEWLETT-PACKARD France
Manufacturer's address: 5 Avenue Raymond Chanas-Eybens
38053 GRENOBLE Cedex 09 - FRANCE
Declares that the product :
Product Name **LCD 15" Monitor**
Model Name **TFT1501**
Product Number **P4825**** (Where * can be any alphanumeric character or blank)

Conforms to the following Product Specifications:

- SAFETY
  - International : IEC 60950:1991 +A1 +A2 +A3 +A4 / GB4943-1995.
  - Europe : EN 60950:1992 +A1 +A2 +A3 +A4 +A11.

- ELECTRO-MAGNETIC COMPATIBILITY

  - CISPR22:1997 / EN55022:1998 Class B
  - CISPR24:1997 / EN55024:1998
  - IEC 61000-3-3:1994 / EN61000-3-3:1995
  - GB9254-1998
  - FCC Title 47 CFR, Part 15 Class B (1)
  - ICES-003, Issue 3
  - VCCI-B
  - AS/NZ 3548:1995

Products bearing the CE marking (2) also comply with:

IEC 61000-3-2:1995 / EN 61000-3-2:1995. + A14
Those products comply with the requirements of the following Directives and carry the CE-marking accordingly: EMC Directive 89/336/EEC and Low Voltage Directive 73/23/EEC, both amended by the Directive 93/68/EEC.

(1) This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:
a- This device may not cause harmful interference, and
b- This device must accept any interference received, including interference that may cause undesired operation.

(2) All products sold in the European Economic Area (EEA) bear the CE marking.

Grenoble
June 2002

Benoit MONTFORT
Quality Manager

For Compliance Information ONLY, contact :
USA contact : Hewlett Packard Company, Corporate Product Regulations Manager
3000 Hanover Street, Palo Alto, CA 94304. (Phone (+1) (650) 857-1501)

Agency Regulatory Notices

Federal Communications Commission Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Hewlett Packard Company may void the user's authority to operate the equipment.

Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

Declaration of Conformity for Products Marked with FCC Logo, United States Only

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For questions regarding your product, contact:

Hewlett-Packard Company
P. O. Box 692000, Mail Stop 530113
Houston, Texas 77269-2000

Or, call –1-800-652-6672 (1-800-OK COMPAQ)

For questions regarding this FCC declaration, contact:

Hewlett-Packard Company
P. O. Box 692000, Mail Stop 510101
Houston, Texas 77269-2000

Or, call –(281) 514-3333

To identify this product, refer to the Part, Series, or Model number found on the product.

Canadian Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Avis Canadien

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Union Notice

Products with the CE Marking comply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European norms (in brackets are the equivalent international standards):

• EN55022 (CISPR 22)-Electromagnetic Interference

• EN55024 (IEC61000-4-2,3,4,5,6,8,11) – Electromagnetic Immunity

• EN61000-3-2 (IEC61000-3-2) – Power Line Harmonics

• EN61000-3-3 (IEC61000-3-3) - Power Line Flicker

• EN60950 (IEC950) – Product Safety

Japanese Notice

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＢ情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると受信障害を引き起こすことがあります。

取り扱い説明書に従って正しい取り扱いをして下さい。

Korean Notice

사용자 안내문 : **B** 급 기기

이 기기는 비업무용으로 전자파적합등록을 받은 기기이오니, 주거지역에서는 물론, 모든 지역에서 사용 하실 수 있습니다.

EPA Energy Star Compliance

Monitors that are marked with the Energy Star Logo meet the requirements of the EPA Energy Star program. As an Energy Star Partner, Hewlett-Packard Company has determined that this product meets the Energy Star guidelines for energy efficiency. Specific details on using the Energy Saving features can be found in the energy saver or power management section of the computer manual.

Power Cord Set Requirements

The monitor power supply is provided with Automatic Line Switching (ALS). This feature allows the monitor to operate on input voltages between 100-120V or 200-240V.

The power cord set (flexible cord or wall plug) received with the monitor meets the requirements for use in the country where you purchased the equipment.

If you need to obtain a power cord for a different country, you should purchase a power cord that is approved for use in that country.

The power cord must be rated for the product and for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cord should be greater than the voltage and current rating marked on the product. In addition, the cross-sectional area of the wire must be a minimum of $0.75mm^2$ or 18AWG, and the length of the cord must be between 6 feet (1.8m) and 12 feet (3.6m). If you have questions about the type of power cord to use, contact your HP authorized service provider.

A power cord should be routed so that it is not likely to be walked on or pinched by items placed upon it or against it. Particular attention should be paid to the plug, electrical outlet, and the point where the cord exits from the product.

Recycling your Product

HP has a strong commitment toward the environment. Your Compaq monitor has been designed to respect the environment as much as possible.

HP can also take back your old monitor for recycling when it reaches the end of its useful life.

HP has a product take-back program in several countries. The collected equipment is sent to one of HP's recycling facilities in Europe or the USA. As many parts as possible are reused. The remainder is recycled. Special care is taken for batteries and other potentially toxic substances, which are reduced to non-harmful components through a special chemical process. If you require more details about HP's product take-back program, contact your dealer or your nearest HP Sales Office.

This product contains the following materials that may require special handling at end-of-life: mercury in the liquid display.

Congratulations!

You have just purchased a TCO'99 approved and labelled product! Your choice has provided you with a product developed for professional use. Your purchase has also contributed to reducing the burden on the environment and also to the further development of environmentally adapted electronics products.

This product meets the requirements for the TCO'99 scheme which provides for an international environmental and quality labelling of personal computers. The labelling scheme was developed as a joint effort by the TCO (The Swedish Confederation of Professional Employees), Svenska Naturskyddsforeningen (The Swedish Society for Nature Conservation), Statens Energimyndighet (The Swedish National Energy Administration) and SEMKO AB.

The requirements cover a wide range of issues: environment, ergonomics, usability, reduction of electric and magnetic fields, energy consumption and electrical safety.

Why do we have environmentally labelled computers?

In many countries, environmental labelling has become an established method for encouraging the adaptation of goods and services to the environment. The main problem, as far as computers and other electronics equipment are concerned, is that environmentally harmful substances are used both in the products and during their manufacture. Since it is not so far possible to satisfactorily recycle the majority of electronics equipment, most of these potentially damaging substances sooner or later enter nature.

There are also other characteristics of a computer, such as energy consumption levels, that are important from the viewpoints of both the work (internal) and natural (external) environments. Since all methods of electricity generation have a negative effect on the environment (e.g. acidic and climate-influencing emissions, radioactive waste), it is vital to save energy. Electronics equipment in offices is often left running continuously and thereby consumes a lot of energy.

What does the environmenal labelling involve?

The environmental demands has been developed by Svenska Naturskyddsforeningen (The Swedish Society for Nature Conservation). These demands impose restrictions on the presence and use of heavy metals, brominated and chlorinated flame retardants, CFCs (freons) and chlorinated solvents, among other things. The product must be prepared for recycling and the manufacturer is obliged to have an environmental policy which must be adhered to in each country where the company implements its operational policy.

The energy requirements include a demand that the computer and/or display, after a certain period of inactivity, shall reduce its power consumption to a lower level in one or more stages. The length of time to reactivate the computer shall be reasonable for the user.

29 January, 1999

Below you will find a brief summary of the environmental requirements met by this product. The complete environmental criteria document may be ordered from:

TCO Development

SE-114 94 Stockholm, Sweden

Fax: +46 8 782 92 07
Email (Internet): development@tco.se
Current information regarding TCO'99 approved and labelled products may also be obtained via the Internet, using the address: http://www.tco-info.com/

Environmental requirements

Flame retardants

Flame retardants are present in printed circuit boards, cables, wires, casings and housings. Their purpose is to prevent, or at least to delay the spread of fire. Up to 30% of the plastic in a computer casing can consist of flame retardant substances. Most flame retardants contain bromine or chloride, and those flame retardants are chemically related to another group of environmental toxins, PCBs. Both the flame retardants containing bromine or chloride and the PCBs are suspected of giving rise to severe health effects, including reproductive damage in fish-eating birds and mammals, due to the bio-accumulative* processes. Flame retardants have been found in human blood and researchers fear that disturbances in foetus development may occur.

The relevant TCO'99 demand requires that plastic components weighing more than 25 grams must not contain flame retardants with organically bound bromine or chlorine. Flame retardants are allowed in the printed circuit boards since no substitutes are available.

Cadmium**

Cadmium is present in rechargeable batteries and in the colour-generating layers of certain computer displays. Cadmium damages the nervous system and is toxic in high doses. The relevant TCO'99 requirement states that batteries, the colour-generating layers of display screens and the electrical or electronics components must not contain any cadmium.

Mercury**

Mercury is sometimes found in batteries, relays and switches. It damages the nervous system and is toxic in high doses. The relevant TCO'99 requirement states that batteries may not contain any mercury. It also demands that mercury is not present in any of the electrical or electronics components associated with the labelled unit. There is however one exception. Mercury is, for the time being, permitted in the back light system of flat panel monitors as there today is no commercially available alternative. TCO aims on removing this exception when a mercury free alternative is available.

CFCs (freons)

The relevant TCO'99 requirement states that neither CFCs nor HCFCs may be used during the manufacture and assembly of the product. CFCs (freons) are sometimes used for washing printed circuit boards. CFCs break down ozone and thereby damage the ozone layer in the stratosphere, causing increased reception on earth of ultraviolet light with e.g. increased risks of skin cancer (malignant melanoma) as a consequence.

Lead**

Lead can be found in picture tubes, display screens, solders and capacitors. Lead damages the nervous system and in higher doses, causes lead poisoning. The relevant TCO´99 requirement permits the inclusion of lead since no replacement has yet been developed.

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[*] *Bio-accumulative is defined as substances which accumulate within living organisms*

[**] *Lead, Cadmium and Mercury are heavy metals which are Bio-accumulative.*